

SYSTEM AND METHOD FOR EFFERVESCENT FUEL ATOMIZATION

ABSTRACT OF THE DISCLOSURE

[0040] A system and method are provided for atomization and combustion. The system and method include mixing a volume of liquid fuel with a volume of a corresponding soluble gas to create a liquid fuel/dissolved gas mixture, and pressurizing the resulting liquid fuel/dissolved gas mixture. The liquid fuel/dissolved gas mixture is discharged through a discharge opening in fluid communication with a lower pressure chamber forming droplets of the liquid fuel/dissolved gas mixture, wherein the soluble gas emerges from solution further breaking up the droplets forming smaller droplets for promoting combustion of the smaller droplets in the chamber.